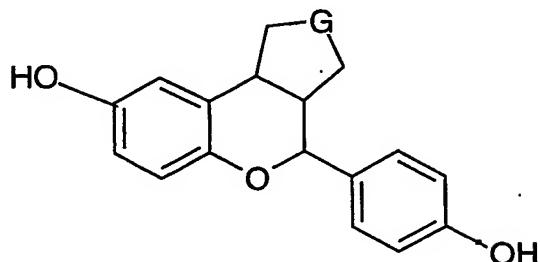


-112-

5

WE CLAIM:

1. A compound according to the formula:



10

wherein

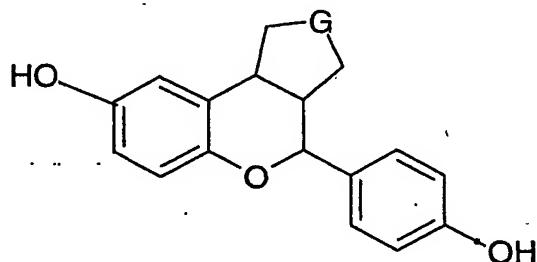
G is $\text{CHC}_1\text{-C}_6\text{alkyl}$, $\text{C}=\text{O}$, CHOH , CF_2 , $\text{C}(\text{OH})\text{CF}_3$, CHCF_3 , $\text{CH}(\text{OH})\text{C}_1\text{-C}_6\text{alkyl}$,

$\text{CH-OC}_1\text{-C}_6\text{alkyl}$, $\text{CH-O}(\text{CO})\text{C}_1\text{-C}_6\text{alkyl}$, CHF , HCN , $\text{CHC}_2\text{-C}_4\text{alkenyl}$,

15 $\text{CHC}_2\text{-C}_4\text{alkynyl}$, CHbenzyl , difluoromethylene, O, S(O)n , wherein n is 0-2;

including their enantiomers.

2. A compound according to the formula:



20

wherein

wherein G is $\text{CHC}_1\text{-C}_6\text{alkyl}$, $\text{C}=\text{O}$, CHOH , CF_2 , $\text{C}(\text{OH})\text{CF}_3$, CHCF_3 , $\text{CH}(\text{OH})\text{C}_1\text{-C}_6\text{alkyl}$, $\text{CH-OC}_1\text{-C}_6\text{alkyl}$, $\text{CH-O}(\text{CO})\text{C}_1\text{-C}_6\text{alkyl}$, CHF , O, S(O)n , wherein n is 0-2;

25

including the enantiomers;

and the pharmaceutically acceptable salts thereof.

5 3. A compound selected from the group comprising:

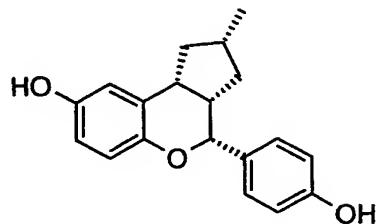
- a) (2*S*, 3*aS*, 4*R*, 9*bR*)-4-(4-Hydroxy-phenyl)-2-methyl-1,2,3,3*a*,4,9*b*-hexahydro-cyclopenta[c]chromen-8-ol;
- b) (2*R*, 3*aR*, 4*S*, 9*bS*)-4-(4-Hydroxy-phenyl)-2-methyl-1,2,3,3*a*,4,9*b*-hexahydro-cyclopenta[c]chromen-8-ol;
- c) (2*R*, 3*aR*, 4*S*, 9*bS*)-2-tert-Butyl-4-(4-hydroxy-phenyl)-1,2,3,3*a*,4,9*b*-hexahydro-cyclopenta[c]chromen-8-ol;
- d) (2*S*, 3*aS*, 4*R*, 9*bR*)-2-tert-Butyl-4-(4-hydroxy-phenyl)-1,2,3,3*a*,4,9*b*-hexahydro-cyclopenta[c]chromen-8-ol;
- e) (3*aS*, 4*S*, 9*bS*)-4-(4-Hydroxy-phenyl)-1,3*a*,4,9*b*-tetrahydro-3H-2,5-dioxa-cyclopenta[a]naphthalen-8-ol;
- f) (3*aR*, 4*R*, 9*bR*)-4-(4-Hydroxy-phenyl)-1,3*a*,4,9*b*-tetrahydro-3H-2,5-dioxa-cyclopenta[a]naphthalen-8-ol;
- g) (3*aR*, 4*S*, 9*bS*)-4-(4-Hydroxy-phenyl)-1,3*a*,4,9*b*-tetrahydro-3H-5-oxa-2-thia-cyclopenta[a]naphthalen-8-ol;
- h) (3*aS*, 4*R*, 9*bR*)-4-(4-Hydroxy-phenyl)-1,3*a*,4,9*b*-tetrahydro-3H-5-oxa-2-thia-cyclopenta[a]naphthalen-8-ol;
- i) (2*S*, 3*aR*, 4*S*, 9*bS*)-4-(4-Hydroxy-phenyl)-2-oxo-1,2,3,3*a*,4,9*b*-hexahydro-5-oxa-2*λ*⁴-thia-cyclopenta[a]naphthalen-8-ol;
- j) (2*R*, 3*aS*, 4*R*, 9*bR*)-4-(4-Hydroxy-phenyl)-2-oxo-1,2,3,3*a*,4,9*b*-hexahydro-5-oxa-2*λ*⁴-thia-cyclopenta[a]naphthalen-8-ol;
- k) (3*aR*, 4*S*, 9*bS*)-4-(4-Hydroxy-phenyl)-2,2-dioxo-1,2,3,3*a*,4,9*b*-hexahydro-5-oxa-2*λ*⁶-thia-cyclopenta[a]naphthalen-8-ol;
- l) (3*aS*, 4*R*, 9*bR*)-4-(4-Hydroxy-phenyl)-2,2-dioxo-1,2,3,3*a*,4,9*b*-hexahydro-5-oxa-2*λ*⁶-thia-cyclopenta[a]naphthalen-8-ol;
- m) (3*aR*, 4*S*, 9*bS*)-8-Hydroxy-4-(4-hydroxy-phenyl)-1,3*a*,4,9*b*-tetrahydro-3H-cyclopenta[c]chromen-2-one;
- n) (3*aS*, 4*R*, 9*bR*)-8-Hydroxy-4-(4-hydroxy-phenyl)-1,3*a*,4,9*b*-tetrahydro-3H-cyclopenta[c]chromen-2-one;
- o) (2*S*, 3*aR*, 4*S*, 9*bS*)-4-(4-Hydroxy-phenyl)-1,2,3,3*a*,4,9*b*-hexahydro-cyclopenta[c]chromene-2,8-diol;

- 5 p) (*2R, 3aS, 4R, 9bR*)-4-(4-Hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromene-2,8-diol;
- q) (*3aR, 4S, 9bS*)-2,2-Difluoro-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- r) (*3aS, 4R, 9bR*)-2,2-Difluoro-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 10 s) (*2S, 3aR, 4S, 9bS*)-4-(4-Hydroxy-phenyl)-2-trifluoromethyl-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- t) (*2R, 3aS, 4R, 9bR*)-4-(4-Hydroxy-phenyl)-2-trifluoromethyl-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 15 u) (*2R, 3aS, 4S, 9bS*)-4-(4-Hydroxy-phenyl)-2-trifluoromethyl-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- v) (*2S, 3aS, 4R, 9bR*)-4-(4-Hydroxy-phenyl)-2-trifluoromethyl-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- w) (*2R, 3aR, 4S, 9bS*)-2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9bR-hexahydro-cyclopenta[c]chromene-2,8-diol;
- 20 x) (*2S, 3aS, 4R, 9bR*)-2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9bR-hexahydro-cyclopenta[c]chromene-2,8-diol;
- y) (*2S, 3aS, 4R, 9bR*)-2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 25 z) (*2S, 3aR, 4S, 9bS*)-2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- aa) (*2S, 3aR, 4S, 9bS*)-2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- bb) (*2R, 3aR, 4S, 9bS*)-2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 30 cc) (*2S, 3aS, 4R, 9bR*)-4-(4-Hydroxy-phenyl)-2-methoxy-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- dd) (*2R, 3aR, 4S, 9bS*)-4-(4-Hydroxy-phenyl)-2-methoxy-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- ee) (*2S, 3aS, 4R, 9bR*)-Acetic acid 8-hydroxy-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-2-yl ester;

- 5 ff) (*2R, 3aR, 4S, 9bS*)-Acetic acid 8-hydroxy-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-2-yl ester;
- gg) (*2R, 3aS, 4R, 9bR*)-2-Fluoro-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- hh) (*2S, 3aR, 4S, 9bS*)-2-Fluoro-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 10 ii) (*2S, 3aS, 4R, 9bR*)-2-Fluoro-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- jj) (*2R, 3aR, 4S, 9bS*)-2-Fluoro-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 15 kk) (*2R, 3aR, 4S, 9bS*)- and (*2S, 3aS, 4R, 9bR*)-8-Hydroxy-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromene-2-carbonitrile;
- ll) (*2S, 3aR, 4S, 9bS*)- and (*2R, 3aS, 4R, 9bR*)-8-Hydroxy-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromene-2-carbonitrile;
- 20 mm) (*3aR, 4S, 9bS*)- and (*3aS, 4R, 9bR*)-4-(4-Hydroxy-phenyl)-2-methylene-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- nn) (*3aR, 4S, 9bS*)- and (*3aS, 4R, 9bR*)-2-Difluoromethylene-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- oo) (*3aR, 4S, 9bS*)- and (*3aS, 4R, 9bR*)-2-Ethynyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 25 pp) 2-Butyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- qq) 4-(4-Hydroxy-phenyl)-2-propyl-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- rr) 2-Ethyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;
- 30 ss) 2-Benzyl-4-(4-hydroxy-phenyl)-1,2,3,3a,4,9b-hexahydro-cyclopenta[c]chromen-8-ol;

including the enantiomers thereof.

5 4. A compound according to claim 1 wherein the compound is of the formula:



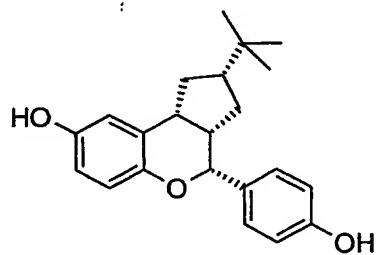
and the enantiomers thereof.

10 5. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

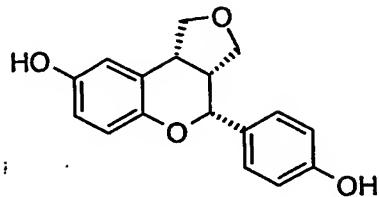
15 6. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

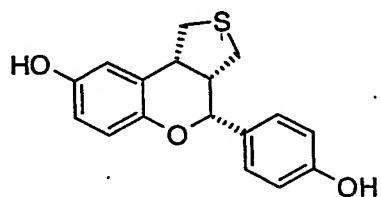
-117-

- 5 7. A compound according to claim 1 wherein the compound is of the formula:



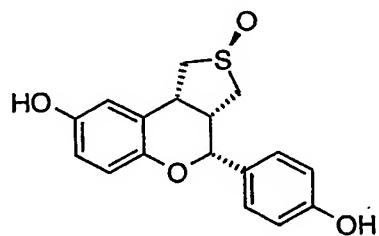
and the enantiomers thereof.

- 10 8. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

- 15 9. A compound according to claim 1 wherein the compound is of the formula:

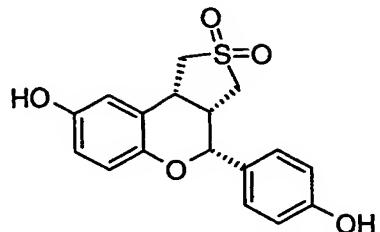


and the enantiomers thereof.

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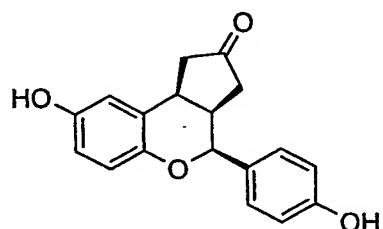
-118-

- 5 10. A compound according to claim 1 wherein the compound is of the formula:



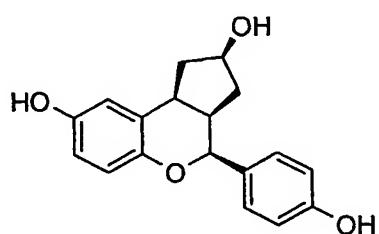
and the enantiomers thereof.

- 10 11. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

- 15 12. A compound according to claim 1 wherein the compound is of the formula:

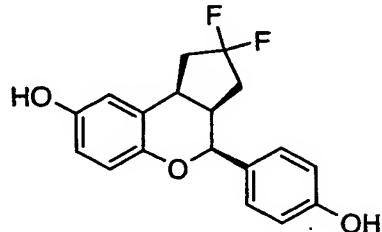


and the enantiomers thereof.

20

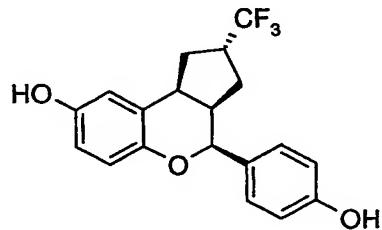
-119-

- 5 13. A compound according to claim 1 wherein the compound is of the formula:



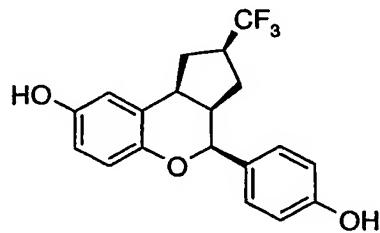
and the enantiomers thereof.

- 10 14. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

- 15 15. A compound according to claim 1 wherein the compound is of the formula:

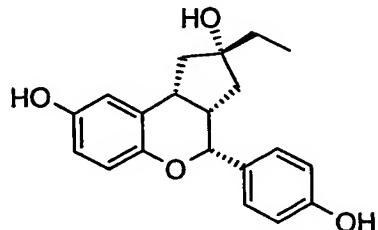


and the enantiomers thereof.

20

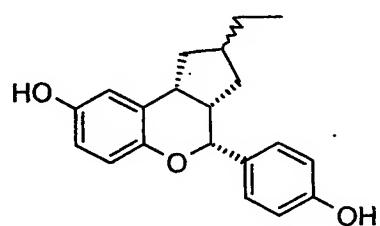
-120-

- 5 16. A compound according to claim 1 wherein the compound is of the formula:



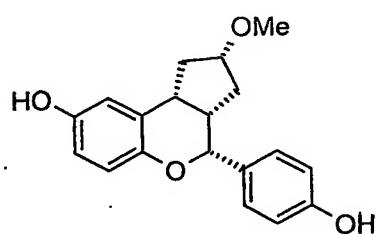
and the enantiomers thereof.

- 10 17. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

- 15 18. A compound according to claim 1 wherein the compound is of the formula:

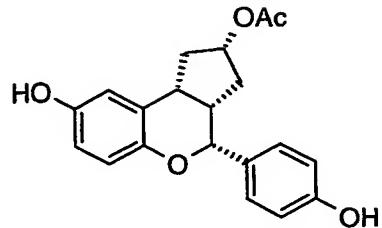


and the enantiomers thereof.

20

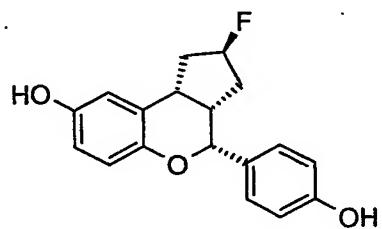
-121-

- 5 19. A compound according to claim 1 wherein the compound is of the formula:



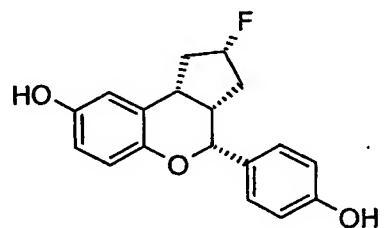
and the enantiomers thereof.

- 10 20. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

- 15 21. A compound according to claim 1 wherein the compound is of the formula:

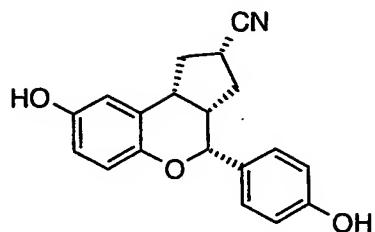


and the enantiomers thereof.

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-122-

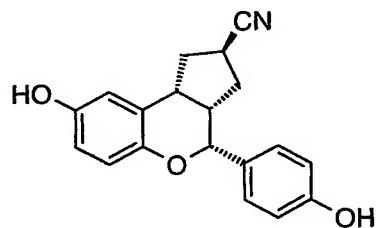
- 5 22. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

10

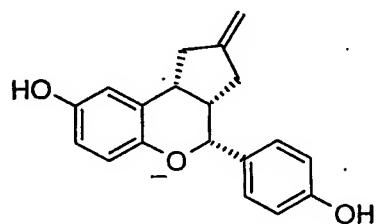
23. A compound according to claim 1 wherein the compound is of the formula:



15

and the enantiomers thereof.

24. A compound according to claim 1 wherein the compound is of the
20 formula:

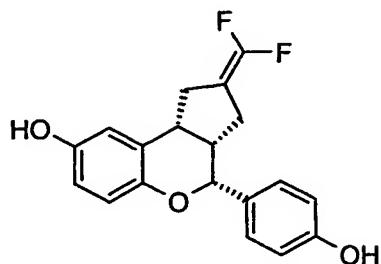


and the enantiomers thereof.

25

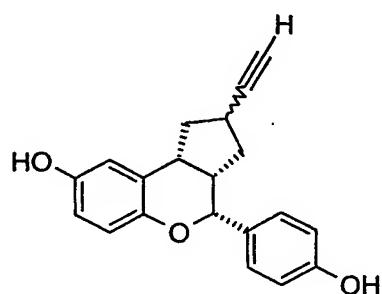
-123-

- 5 25. A compound according to claim 1 wherein the compound is of the formula:



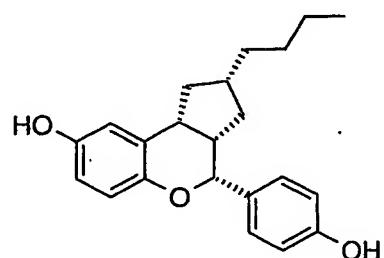
and the enantiomers thereof.

- 10 26. A compound according to claim 1 wherein the compound is of the formula:



15 and the enantiomers thereof.

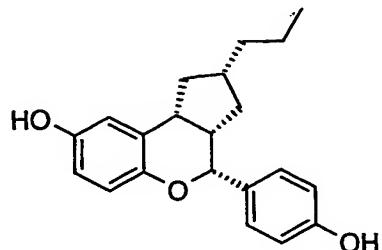
27. A compound according to claim 1 wherein the compound is of the formula:



- 20 and the enantiomers thereof.

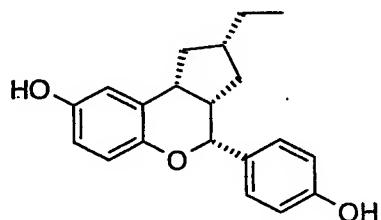
-124-

- 5 28. A compound according to claim 1 wherein the compound is of the formula:



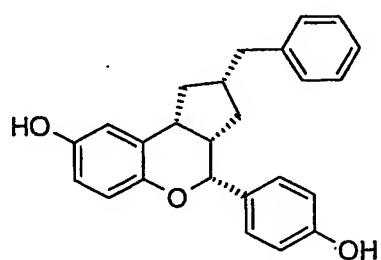
and the enantiomers thereof.

- 10 29. A compound according to claim 1 wherein the compound is of the formula:



and the enantiomers thereof.

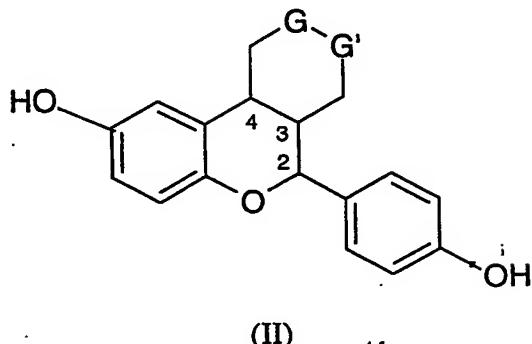
- 15 30. A compound according to claim 1 wherein the compound is of the formula:



20 and the enantiomers thereof.

-125-

5 31. A compound according to the formula II:



wherein:

G and G' are each CH₂, C=O, C=CH₂, CHC₁-C₆alkyl or CF₂; with the proviso that
10 when G' is other than CH₂, G must be CH₂ and that when G is other than CH₂, G' must
be CH₂;
including the enantiomers and the pharmaceutically acceptable salts thereof.

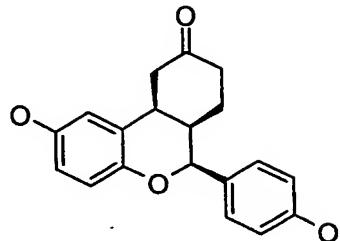
32. A compound selected from the group comprising:

- 15 a. (6S, 6aR, 10aS)-2-Hydroxy-6-(4-hydroxy-phenyl)-6,6a,7,8,10,10a-hexahydro-
benzo[c]chromen-9-one;
b. (6aR, 6S, 10aS)-6-(4-Hydroxy-phenyl)-9-methylene-6a,7,8,9,10,10a-
hexahydro-6H-benzo[c]chromen-2-ol;
20 c. (6aR, 6S, 9S, 10aS)-6-(4-Hydroxy-phenyl)-9-methyl-6a,7,8,9,10,10a-
hexahydro-6H-benzo[c]chromen-2-ol;
d. (6aR, 6S, 9R, 10aS)-6-(4-Hydroxy-phenyl)-9-methyl-6a,7,8,9,10,10a-
hexahydro-6H-benzo[c]chromen-2-ol;
e. (6aR, 6S, 10aS)-9,9-Difluoro-6-(4-hydroxy-phenyl)-6a,7,8,9,10,10a-
hexahydro-6H-benzo[c]chromen-2-ol;
25 f. (6aR, 6S, 10aS)-2-Hydroxy-6-(4-hydroxy-phenyl)-6a,9,10,10a-tetrahydro-
6H,7H-benzo[c]chromen-8-one;

including their enantiomers.

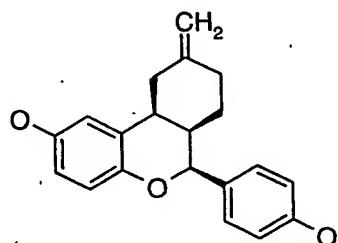
-126-

- 5 33. A compound according to claim 31 wherein the compound is of the formula:



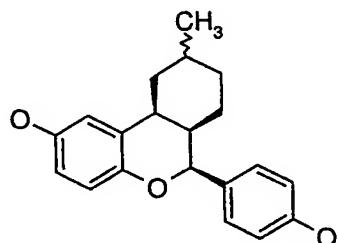
and the enantiomers thereof.

- 10 34. A compound according to claim 31 wherein the compound is of the formula:



and the enantiomers thereof.

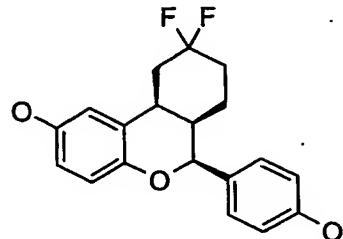
- 15 35. A compound according to claim 31 wherein the compound is of the formula:



and the enantiomers thereof.

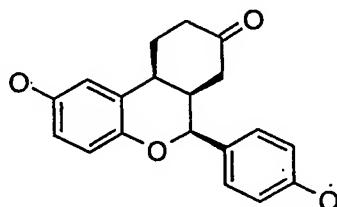
-127-

- 5 36. A compound according to claim 31 wherein the compound is of the formula:



and the enantiomers thereof.

- 10 37. A compound according to claim 31 wherein the compound is of the formula:



and the enantiomers thereof.

- 15 38. A pharmaceutical composition comprising a compound of according to any of Claims 1 through 37 and a pharmaceutically acceptable carrier.

- 20 39. A method of selectively binding to estrogen receptor beta in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a compound of any of Claims 1 through 38.

40. A method of treating a patient afflicted with an estrogen receptor beta mediated disease condition comprising administering to said patient a therapeutically effective amount of a compound of any of Claims 1 through 38.

-128-

5 41. A method of treating prostate cancer in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a compound of any of Claims 1 through 38.

10 42. A method of treating benign prostatic hyperplasia (BPH) in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a compound of any of Claims 1 through 38.

15 43. A method according to any of Claims 39-42 wherein said patient is a human.

20 44. Use of a compound according to any one of Claims 1 to 38 in the manufacture of a medicament for the treatment of prostate cancer, benign prostatic hyperplasia, or an estrogen receptor beta mediated disease condition.

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